

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Colyer et al.

Application No.: 10/591,109

Filed: October 5, 2007

For: **METHOD AND PRODUCTS FOR THE SELECTIVE DEGRADATION OF PROTEINS**

Confirmation No.: 4321

Group Art Unit: 1647

Examiner: Daniel C. Gamett

Date: June 12, 2009

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO ELECTION OF SPECIES REQUIREMENT

Sir:

This response is submitted in reply to the Office Action dated May 5, 2009 ("the Office Action"). In the Office Action, the Examiner required an election alleging the following species:

a. A product comprising a targeting module comprising a β -catenin binding domain of E-cadherin, a destruction module comprising an F-box mutated such that it is not able to bind to the phosphorylated form of β -catenin and a replacement module comprising wild type β -catenin (recited in claim 10).

b. A product comprising a targeting module comprising an inhibitor of alcohol dehydrogenase (ADH), a destruction module comprising a protease domain and a replacement module comprising a functional ADH with any protease recognition motifs removed and specific mutations to substantially reduce sensitivity to a targeting module (recited in claim 11).

c. A product comprising a targeting module comprising a PLB target motif, a destruction module comprising absence of either or both lysine 3 and/or 27 so that ubiquitination cannot occur together with an N-terminal domain exhibiting a destabilizing N-terminal residue and a replacement module comprising a modified PLB sequence such that it is unable to inhibit Ca^{2+} -pump activity (recited in claim 12).

In response to the Office Action requiring an election of species, Applicants hereby elect **species a** (corresponding to a product comprising a targeting module comprising a β -catenin binding domain of E-cadherin, a destruction module comprising an F-box mutated such that it is not able to bind to the phosphorylated form of β -catenin and a replacement module comprising wild type β -catenin). Applicants respectfully submit that claims 1-12 read upon the elected species.

Applicants further note that this election is made with traverse. More specifically, in contrast to the assertions of the Office Action, Applicants respectfully submit that the alleged non-linked species are indeed linked so as to form a single inventive concept under PCT Rule 13.1. The alleged species of claim 10 (β -catenin), 11 (ADH) and 12 (PLB) are merely illustrative, repeat examples of one fundamental embodiment that is directed to achieving the removal of a target and its replacement using a strategy that acts at the protein level rather than at the DNA or RNA, i.e., genome level. Such an approach can be considered a strategy to remove and replace individual protein targets, implemented by expressing a product comprising three modules: The first module allows the product to interact physically with the target (protein) molecule; the second module coordinates the rapid degradation of the target molecule; and the third module performs "the replacement function" acting like the original target molecule in all but at least one respect. Accordingly, the three aspects (as noted in claims 10, 11 and 12) all follow this template, but have different component parts fulfilling each of the three modules. Thus, the alleged species possess unity of invention and are linked as to form a single general inventive concept under PCT Rule 13.1. Thus, Applicants respectfully request that all alleged separate species be examined at this time.

Applicants respectfully submit that this application is now in condition for substantive examination, which action is requested.

If any extension of time for the accompanying response or submission is required, Applicants request that this be considered a petition therefor. The Commissioner is hereby authorized to charge any additional fee, which may be required, or credit any refund, to our Deposit Account No. 50-0220.

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Respectfully submitted,

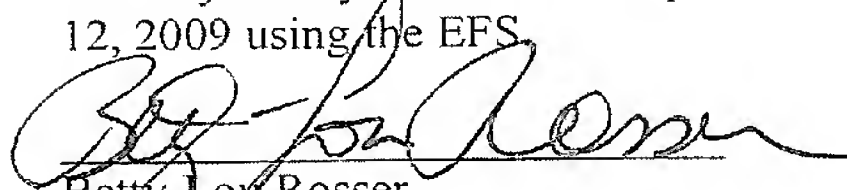


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**CERTIFICATION OF ELECTRONIC TRANSMISSION
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I hereby certify that this correspondence is being transmitted electronically to the U.S. Patent and Trademark Office on June 12, 2009 using the EFS.


Betty-Lou Rosser
Date of Signature: June 12, 2009